VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

CIVIL DIVISION

DOMESTIC BUILDING LIST VCAT REFERENCE NO. D703/2005

CATCHWORDS

Domestic building – defective brickwork – when demolition and reconstruction justified – whether less expensive method of rectification should be used where unproven and uncertain - reasonableness

APPLICANTS	Goce Avramoski, Joanne Avramoski
RESPONDENT	Barrett Property Group Western Region Pty Ltd (ACN 099 375 630)
WHERE HELD	Melbourne
BEFORE	Senior Member R. Walker
HEARING TYPE	Hearing
DATE OF HEARING	9 March 2006
DATE OF ORDER	29 June 2006

Avramoski v Barrett Property Group Western Region (Domestic Building) [2006] VCAT 1216

ORDER

1. Order the Respondent to carry out the following work to the Applicants' house at Lot 638 Market Terrace, Taylors Hill to the standards required by the implied warranties in Section 8 of the Domestic Building Act 1995 and in accordance with the contractual documents:
   (a) demolish the whole of the unrendered brickwork on the house and rear wall of the garage;
   (b) modify the edge of the slab and rebate on the south side to accord with the contract documents and install the flashing required by those documents;
   (c) rebuild the demolished walls and in the course of doing so install brick ties in accordance with the appropriate standards.

2. The said work is to be:
   (a) commenced on a date to be agreed upon in writing by the parties or in default of agreement, ordered by the Tribunal;
   (b) carried out so as not to cause unreasonable inconvenience or disruption to the Applicants;
   (c) completed within a reasonable time.

3. Upon completion of the work the Respondent must remove all rubble and debris and leave the site in a reasonably tidy condition.

4. Any damage done to the building or premises during the course of the work must be made good by the Respondent in a proper and workmanlike manner using good and sufficient materials.

5. If the Respondent does not fully comply with this order the Applicants may apply on notice for an award of damages in substitution for the carrying out of any of the work hereby ordered, such damages to be assessed in a manner to be determined following further hearing.

6. Liberty is reserved to apply for orders as to the commencement date for the work, a determination as to what is reasonable for the purpose of this order or for any further orders or directions that may be necessary or convenient to give effect to this order.

7. Costs are reserved.

SENIOR MEMBER R. WALKER

APPEARANCES:

For the Applicants Mr Smith of Counsel

For the Respondent	Mr Carr of Counsel

REASONS FOR DECISION

Background

1. The Applicants ("the Owners") are the Owners of the dwelling house and land at 2 Market Terrace, Taylors Hill. The house was constructed for them by the Respondent ("the Builder") pursuant to a building contract dated 16 July 2004. Work started on 1 September 2004 and an occupancy permit for the building was issued by the relevant building surveyor on 13 April 2005. The Owners have paid the full price to the Builder and have moved into the house.

The dispute

2. The Owners allege that there are the following defects which need to be rectified:
   (a) The southern brick wall immediately behind the garage has been defectively constructed, in that the bottom three courses consist of half bricks instead of whole bricks;
   (b) The perpends [*the mortar gaps between the brick ends*] in all brick walls vary considerably in width making the walls unsightly;
   (c) The colour matching of the bricks was poor and some of the bricks were stained. The Builder's attempts at rectification were unsatisfactory, also making the walls unsightly;
   (d) Insufficient space has been left between brick sills and the windows to allow for shrinkage of the frame;
   (e) There are insufficient brick ties tying the southern wall to the stud frame of the house.

3. The Owners contend that the only practical way to address all these problems is to demolish and reconstruct the brick walls on both sides and the rear of the house and they seek an order from the Tribunal that the Builder do that. The brick walls at the front of the house could remain because they have been rendered and are assumed to be structurally sound.

4. The Builder's position may be summarised as follows:

(a) It accepts that the southern wall has been defectively constructed but contends that the defect can be rectified in the manner described by its engineer, as detailed below;

(b) It acknowledges that the perpends vary in width as claimed but say that this is not a defect;

(c) It agrees that there was a problem with colour matching the bricks but says that the problem has been cured by colouring or treating the bricks, which has given the walls an acceptable appearance;

(d) It agrees that one brick sill needs to be reconstructed to allow a sufficient gap below the window frame and offers to do this; and

(e) It denies there are insufficient brick ties.

The hearing

5. The matter came before me for hearing on 10 April 2006. Mr Smith of Counsel appeared for the Owners and Mr Carr of Counsel appeared for the Builder. I heard evidence from the Owners, from a building expert, Mr McDonald, from a structural engineer, Mr Genitsaris and from a valuer, Mr Logan. For the Builder I heard evidence from its regional manager, Mr Lee, a structural engineer, Mr Kingston, the building surveyor, Mr Murphy and from a building expert, Mr Gairns.

The witnesses

6. The evidence from the Owners was historical and detailed their complaints which they said were not adequately addressed by the Builder. Mr McDonald, Mr Genitsari, Mr Logan, Mr Gairns, Mr Murphy and Mr Kingston were all suitably qualified in their respective areas to give expert evidence. On the key issue of the structural integrity of the southern wall, only the two engineers had relevant expertise. It was not suggested that Mr Lee has any building qualification. The witnesses for the Owners were independent experts but the Builder has ongoing business relationships with two of its expert witnesses. The Building surveyor, Mr Murphy said that his company issues 250 permits a year for houses constructed by the Builder which he says provides about 8% of its work. Mr Gairns is a director of BSS, a firm of Architects and Building Consultants, which is, and has been for a number of years, retained by the

Builder to carry out periodic inspections of houses built by it during the course of construction. Pursuant to this retainer it inspects between 600 and 700 houses a year and advises the Builder of defects and matters that need to be addressed. Each house is inspected at least twice.

Decision

7. After hearing and considering all of this evidence I find that the brickwork on the southern, western and eastern walls of the building and on the rear wall of the garage needs to be demolished and reconstructed. The reasons for this conclusion follow.

The south wall

8. The house is brick veneer, that is, it is built on a timber frame which supports the roof and other parts of the structure. The external veneer is a single brick wall designed to be tied to the timber frame at 600mm centres. It bears no structural load apart from its own weight. The drawings show a gap between the brick veneer and the timber frame. The house is constructed on a waffle pod raft slab, the top surface of which is the floor level of the house. Around the perimeter, the slab is stepped down so that the bottom three courses of bricks are below the floor level. The horizontal width of this step is 150 mm. Since the width of the bricks is less than that, there is a gap behind the bricks in the lower three courses up to 40mm wide. The bottom of the timber frame of the house is at floor level and, in the cavity between the timber frame and the brick veneer, the drawings show a continuous flashing extending from above the sole plate of the stud wall down to the underside of the bottom row of bricks. Drain holes are specified every metre along the length of the wall. The purpose of this arrangement was to ensure that any water that entered the cavity between the brick veneer and the stud wall would fall to the bottom of the cavity and be directed by the flashing out the drain holes. That is the design shown on the drawings but it is not the way the southern wall was built.

9. When the slab was poured the step down for the southern wall for a length of about 6 metres was too narrow to permit the laying of full width bricks for the bottom three courses and also leave a gap between the inside face of those

bricks and the edge of the slab to accommodate the flashing required by the plans. To overcome this difficulty the Builder cut the bricks for the bottom three courses approximately in half so that instead of having full width bricks for the bottom three courses there are only half bricks. Pieces of broken brick and mortar were inserted behind this half brick wall in an apparent attempt to provide some additional support for the full-width wall above but they are more fragments than substantial sections of brick and a great many cavities were left. The first full width course in the wall is laid on a half brick wall and the rear half of that is above floor level. It is unsupported except for the half brick wall below it and the brick ties that hold it to the interior stud wall. Without demolishing the wall it is impossible to ascertain the extent of the problem. The width of the step does not appear to be uniform. From my inspection the areas where bricks have been removed and the construction method exposed I think it likely that most of the two storey brick wall on that side of the house has been built in this way.

10. The Owners noticed that the bottom courses of this wall had been laid with half bricks very early in the construction and raised concerns with the Builder only to be assured that it was an acceptable method of construction and that the Builder's workmen knew what they were doing. At first the Owners accepted what they were told and the construction of the wall proceeded to full height. They subsequently made several requests to the Builder for a certificate from an engineer that the wall was structurally sound but, despite some promises and numerous assurances as to the integrity of the wall, no such certificate was provided. Concerned about this and having some other complaints about the house, the Owners engaged a building consultant, Mr McDonald, who provided a report. This raised a number of issues apart from those listed above but those have now been resolved. The evidence of the experts was provided in the form of three reports from Mr McDonald and one from each of the others. Further evidence was given at the hearing. A summary of this evidence follows.

The southern wall

11. This involves not only the integrity of the wall itself but the drainage of the cavity between the inner and outer walls. The drainage problem arises from the

present state of the flashing, the fact that the cavity in the half brick courses is largely filled with brick pieces and mortar and that the rectification proposed by the Builder would involve filling in any remaining cavities in the area where the wall was designed to drain. It was not disputed that drainage is an important issue.

The strength of the wall

12. This involves both the compressive strength of the bottom three courses and the robustness of the wall, within the meaning of the Australian Standards. In his first report Mr McDonald pointed out that the compressive strength of the bricks in the lower courses must have been weakened by the method of construction adopted. He said that the bricks, having been broken in this manner, did not have their original compressive strength, that the Builder should obtain confirmation from the brick manufacturer that the bricks as installed are fit for the purpose and also have an engineer confirm the structural strength of the wall and the section of the slab it is bearing on. In saying this he acknowledged that he did not have the expertise to assess these matters himself.

13. The Owners' structural engineer Mr Genitsaris, said in paragraph three of his report:

> *"This house has been built on a Class H site, which is typically subject to up to 70mm of ground surface movements (due to seasonal changes in soil moisture content). As this is a waffle pod slab, (i.e. the slab is built on ground surface), the soil\ground movements will cause the building to regularly and constantly move. These movements we believe will eventually result in loosening and moving of the brick fragments especially when considering the presence of the damp proof "slip" joint) which will then lead to insufficient bearing and hence failure\collapse of the brick wall. We note that the brick wall is tied to the timber frame and for this reason we believe that if the wall was to collapse, then it may also pull down part of the frame. Even though this wall is not a load bearing wall, it must still hold its own weight (approximately 1,000 kg per metre)"*(sic.).

14. He produced calculations to demonstrate that the wall as constructed does not meet the robustness requirements of section 4.6 of A.S. 3700 ("the Code"). This was a key area of dispute with the Builder's engineer, Mr Kingston, who said that it did. Their disagreement arose from different interpretations of the Code. The key figure used in each calculation was derived from a table in the Code which provided one figure, used by Mr Kingston, if it had lateral support and another figure, used by Mr Genitsaris, if the wall were unsupported laterally. Mr Kingston said that the metal brick ties joining the brick wall to the stud wall amounted to lateral support but Mr Genitsaris said they did not. It was common ground that there was no lateral support except for those ties. To support his interpretation, Mr Genitsaris pointed to the definition of "lateral support" in clause 1.5.2.20 of the Code, which defines the term as follows:

"Lateral support – the support (including a footing, buttress, cross-wall, beam, floor, or braced roof structure) that effectively restrains a wall or isolated pier in the direction of its thickness, except that an isolated pier may also have lateral support in the direction of its width."

Although this is an inclusive definition, the examples used in it are all substantial building members. The brick ties I saw on site were thin strips of galvanised metal. Further, the use of brick ties is required for every brick veneer building and is therefore so widespread that I think they would have been included as examples in the definition if they were thought to provide lateral support. For these reasons I prefer Mr Genistaris' opinion that the wall does not have "lateral support" as that term is used in the Code. Consequently, his calculations as to robustness should be preferred, which show that the robustness requirement of the Code is not satisfied.

Eccentric loading

15. Mr Genistaris pointed out that, since the half bricks in the bottom three courses supporting the wall were all on the outside of the bricks above them the wall itself was eccentrically loaded. Mr Kingston disagreed, saying that while the wall remained upright the load was carried evenly by the lower three courses. That may be so but since it was not disputed that the slab will move with changes in moisture content in the ground supporting it, I accept Mr Genitsaris' view that the possibility of the wall moving cannot be ignored.

Drainage of water

16. In addition Mr Genistaris said that the base of the wall does not comply with section 47 of the Code because there is no cavity separating the inner and outer faces of the wall for water to drain into. He also pointed out that the strip of material constituting the damp proof course and flashing was not continuous and did not cover the complete length of the wall. Mr Kingston agreed and his rectification proposal was directed to this problem as well.

Compressive strength

17. To reassure the Owners, the Builder supplied them with a letter from a Mr Kennedy, the structural engineer on the project, dated 7 June 2005. In that letter Mr Kennedy said that the slab itself was structurally sufficient (it is not contended otherwise) but adds:

> *"In our opinion, it is necessary that at least ½ a brick (width) exist to provide satisfactory bearing. This means that where this has not been achieved on site it is recommended that a non-shrink concrete grout be injected into the cavity to provide the required width and minimum bearing."*
>
> He suggested that any queries be addressed to him "through staff at Porter Davis Homes".

18. In a further letter dated 1 August 2005 another engineer from the same firm, a Mr Hansford, expressed the view:

> *"The part brick is well restrained and capable of supporting the applied load from the wall above. Whilst not conventional construction, the wall is structurally stable and structurally satisfactory."*

At the foot of the letter is a sketch, presumably by the author of the letter, showing the inside of the first whole brick course resting upon the edge of the top level of the slab. It is apparent from the photographs and from my own inspection that the wall, as built, has no such support. Neither Mr Kennedy nor Mr Hansford were called to give evidence to support these opinions. Neither was, I am told, willing to provide a Certificate that the wall was structurally sound, although according to Mr Lee, Mr Kennedy was the engineer responsible for the engineering work in the design and construction of the house.

19. Mr Kingston considered the compressive strength of the bottom courses to be adequate, although his calculations were based upon the assumption that the compressive strength of half a brick is half the compressive strength of a whole bricks. He agreed that no-one has conducted any tests of a cut brick to see what its compressive strength is but suggested that his figure of 20 mega-Pascals was "a conservative estimate". He added that the fact that the wall is standing indicates that the bottom courses are capable of supporting it but I cannot assume from the mere fact that something is standing that it is structurally adequate.

20. Mr Genitsaros' calculations showed the compressive strength to be inadequate. He also criticised Mr Kingston for assuming that the compressive strength of half a brick is half the compressive strength of a whole brick. He described the scenario of a collapse as a "probable" scenario although he acknowledged there were no signs of cracking at the moment.

21. Since it is acknowledged that there are no figures available as to the compressive strength of the cut bricks I cannot see how either engineer can calculate the compressive strength of the wall itself. I should add that the half bricks, brick pieces, air spaces and rubble I observed that are supporting the upper wall are so lacking in uniformity that the strength of one part might be quite different from the strength of another. The most I can find on the evidence is that the strength of this two storey section of wall supported on this material is highly questionable but even that limited finding must be a matter of concern.

Rectification proposed by the Builder

22. Although asserting that the wall is structurally adequate, Mr Kingston offered three options to address both the drainage problem and any lack of strength. The first was to demolish and rebuild the wall and modify the slab. He does not comment on this option in his report. The second was to modify the top of slab edge rebate to allow the flashing material to have free drainage to the existing weep holes. Of this he said: *"This modification would require external construction repair access and would be very difficult to carry out"*. The third

option and the one he considered to be *"the most practical and cost effective"* was as follows:

> *"With the permission of the building surveyor, install new weep holes above slab level and inject flowable grout where deemed appropriate to provide full bearing to the underside of the brick course at slab level where the cavity void width is greater than 25mm".*

23. That is how it is expressed in his report but it was apparent from the inspection that there is no such void or indeed, any void at all behind the half brick wall. In his evidence the proposal was amended. He said that grout needed to be installed along the full length of the wall in question. To do this, every third brick in the third course would need to be removed, the waterproof membrane immediately below that brick would need to be lifted and grout injected beneath it. This would, he said, fill any voids below the damp proof course. It would then be necessary to pierce the membrane in order to fill the gap between the membrane and the face of the rebate in the slab. He said the grout would attain a compressive strength of 91 mega Pascals within 7 days.

24. It was put to Mr Kingston in cross examination that to fill the gaps with grout in this way could not be done because of the irregular nature of the construction and the impossibility of being certain that grout would be able to flow into every cavity. He said that it would penetrate very small gaps and suggested that holes would be drilled in the bottom of each perpend to ensure full penetration. He acknowledged that he had not used this process before but said that he would be prepared to issue a Form 12 certificate under the ***Building Act 1993*** provided that the works were carried out in accordance with his recommendation. Since the grout would be above the membrane new weep holes would have to be installed at the level equivalent to the top of the slab and this would require the permission of the surveyor, Mr Murphy.

25. The building surveyor Mr Murphy was the building surveyor responsible for issuing the permit and carrying out the inspections on this house. He said in his report that because the cavity was filled with mortar he would require that additional weepholes be provided at the top of the mortar in every perpend in

order to be satisfied that the drainage of the wall as built would comply with the relevant performance requirements. In cross examination he agreed that it was "uncommon" to have a weephole at each perpend. He said that he had never seen this sort of construction before but would normally accept a Form 12 from a suitably qualified engineer. He said he would consider an application to amend the building permit but no such application had been made. He acknowledged that he had never visited the house nor made any assessment to see if Mr Kingston's proposal was viable.

26. Mr McDonald said that drilling through mortar to reach the flashing without penetrating it would be very difficult. He said the person attempting to inject the grout would not be able to see whether he got it in or not. He added that if there were holes drilled at every brick it would be apparent to any intending purchaser of the house that there was something wrong with the wall. In fact, the proposal is to have two holes at each perpend, a weep hole at the top of the mortar to drain the cavity and another at the bottom to ensure the grout has penetrated. I think this would be quite unsightly.

27. Mr Genistaris said that because the area has already been largely filled with mortar the injection of grout would be "almost impossible with no way of guaranteeing where the grout will go." He also pointed out that the injection of grout, if it could be achieved, would create drainage problems because the half brick wall extends above the level of the slab. This would mean that the water would be pooling above the internal floor level leading to structural and health issues.

Conclusion about the southern wall

28. I am not persuaded that the option for rectification proposed by Mr Kingston would overcome the defects in the southern wall that the Owners have proven exist. Injecting this grout into this material, which is not homogenous and contains voids and material of unknown quality is an untried procedure. It is no more than an experiment and I cannot proceed on the basis that it will be successful. If it fails that might not be known until the wall falls down which Mr Genitsaris thinks is possible. The Builder did not contract to build a house with

a wall that might collapse and that might not have adequate drainage nor should the Owners be required to accept such work. They paid for a properly constructed wall and that can only be achieved by demolishing the wall and rebuilding it properly. To adopt a comment from the joint judgment of the High Court in ***Bellgrove v Eldridge*** (1954) Argus LR 929 at p.933:

> *"To give to the respondent* [the owner] *the cost of a doubtful remedy would by no means adequately compensate her, for the employment of such a remedy could not in any sense be regarded as ensuring to her the equivalent of a substantial performance by the appellant of his contractual obligations."*

The perpends

29. The width of a great many of the perpends on all walls vary from almost nothing to 18, 20 or as much as 25mm. Mr McDonald refers in his report to Part 3.3.1.7(a) of the Building Code of Australia which he says states:

> *"Unless otherwise specified masonry bed and perpend joints are to be a nominal 10mm."*

He said that most of the bed and perpend joints around the house are this size and so this would seem to be the size joint that was intended. He produced Table 1.1 of the Code in which various "tolerances" for "non-structural facework" are listed. According to the Table, the minimum perpend thickness is 5mm, deviation from specified thickness of a perpend is plus or minus "5 mm average" and the maximum difference in thickness of perpends in any wall is 8mm.

30. Mr Gairns acknowledged that the perpend widths varied as alleged by Mr McDonald but said that the "average" variation was within tolerance. The basis of this conclusion was that, upon measuring all perpend widths in a given area and averaging the measurements, the result was less than 5mm away from 10mm. I am not persuaded by any means that that is what the standard means. It would be a strange "tolerance" to adopt for face brickwork. I think it more likely that the standard means that any perpend can vary up to 5mm in either direction from the specified thickness and still be within tolerance. The word "perpend" in column 1 is singular, not plural, and the word "average" may be surplusage and not intended to override that. However it is unnecessary to

express a concluded view because, as Mr Gairns acknowledges, the range of thickness of perpends in any wall must not exceed 8mm and that is exceeded by a considerable margin in many places in all of these walls. Mr Lee suggested on site that the wide perpends were to avoid the use of half bricks but that has not been demonstrated. Bricks can be reduced in length and countless brick walls of varying length are laid within tolerance every day.

31. I accept Mr McDonald's evidence, which accords with my own observations on site, that the substantial variation in the widths of a great many of the perpends in the walls of this house and the rear wall of the garage is both well beyond tolerance and unsightly.

Colour matching the bricks

32. The bricks are in shades of light yellow and red. Some of them have red in the middle ("red bricks") whereas the majority have yellow in the middle. By mixing the colours during laying, an attractive spacing of colour is achievable. In the present case, according to Mr Lee's evidence, the bricks delivered by the manufacturer when the bottom storey was being laid had less red bricks than the second delivery. He said the problem did not become apparent until the scaffolding was removed. They contacted the brick supplier which engaged a company called Nawkaw to change the colours of some of the bricks to present a more balanced appearance. This was done without consulting the Owners.

33. A guarantee has been provided from Nawkaw *"…against faulty workmanship and against faulty tinting materials."* When one reads the conditions of the guarantee it applies only where Nawkaw has inspected the brickwork and the colour treatment or the materials have been *"found to be faulty or defective"*. In that somewhat limited circumstance Nawkjaw is required to *"…rectify the Nawkaw brickwork colour treatment for the site address …"* so long as certain conditions are met. These include that the bricks have not been subjected to any other kind of treatment. The value of this guarantee must be largely dependant upon the goodwill of Nawkaw. The Owners are not able to ascertain which bricks were treated and are subject to the guarantee. They have no knowledge of what the Nawkaw materials were or how they were applied and it is difficult to

see how they would ever be able to prove that the materials or workmanship were defective. The most they would be able to say is that the colour has faded and that does not seem to be sufficient for a claim under this guarantee. According to Mr Avramoski's evidence, he was told by the Builder's staff they would match the Nawkaw guarantee of 25 years in regard to the treated bricks. However, despite earlier assurances, the Builder is unable to identify which bricks have been treated. Mr McDonald said that the red colouring in the lower storey bricks that are believed to have been treated with the Nawkaw process appears to have faded over the last 12 months.

34. Mr Gairns said that Nawkaw is a proprietary product and he did not know what dyes or other chemicals are in it. He said the colour variation in the brickwork of this house is not much different from that found in numerous houses. He says that no-one can say what the bricks will look like in 25 years time but that they will acquire an acceptable patina with age which will be more dominant than any "..subtle change of brick colour". Nevertheless he said that a number of bricks under the WC window required further treatment with the Nawkaw process.

The greenish tinge

35. A greenish tinge in some of the bricks was noted shortly after construction. Mr McDonald said that he thought it had been caused by the Builder using too much hydrochloric acid to clean the bricks. He said this had reacted to vanadium salts in the bricks and caused the discolouration. Mr Gairns agreed that this was the probable cause. An attempt at rectification was made by the Builder which improved the appearance for a time but the discolouration has returned. It was pointed out to me on site and the discoloured bricks were quite noticeable, particularly on the north wall of the house. There is concern that any further treatment might void the Nawkaw guarantee. For the reasons given, I think the guarantee is of limited value in any event, but the earlier rectification attempt has failed and it is unclear what can be done to rectify the problem now apart from replacing individual bricks or demolishing the walls.

Brick sills

36. It is agreed that the brick sill for the dining room needs to be re-laid so as to leave a 5mm gap under the frame.

Brick ties

37. Mr McDonald said that the ties in the south wall where they had been exposed were found to be too widely spaced. He said that under the Code, for a wall with studs spaced at 600mm centres, the ties should be spaced at 600mm centres but that this spacing should be halved to 300mm around openings (doorways and windows) and control joints. He produced a copy of Figure 3.3.3.1 of the Code to support his evidence. He said that the spacing he observed in the exposed brickwork in the south wall showed a spacing of 520mm around the openings. This allegation was not disputed. Mr Smith said I should infer that the same spacing problem exists around the other openings but there has been no investigation to see if that is the case and in the absence of at least one other instance in another location I am not able to draw such an inference. The southern wall was constructed in a particular way and may not be typical in other respects.

What should be ordered?

38. Mr Carr submitted that the Builder should be given the opportunity to rectify the south wall and rebuild the dining room window sill. He said that the appearance of the perpends was a trade off, that is, if the use of half bricks was to be avoided. He said it was an aesthetic issue. As to the greenish bricks, he relied upon Mr Gairns' evidence that they would develop a patina. He said the walls were straight and would keep out the weather and to order them to be rebuilt would be excessive. As authority for the undoubtedly correct proposition that the remedy has to be reasonable in the circumstances he relied upon ***Bellgrove v Eldridge*** (above). That is a case to which reference is often made but the words used in it are seldom referred to. It is instructive to look at what the joint judgment of Dixon CJ and Webb and Taylor JJ had to say in this context. The passages quoted are lengthy but the case is often misunderstood and the indications in the judgment of what the court considered reasonable are useful. At p.931 their Honours say:

"In the present case, the respondent was entitled to have a building erected upon her land in accordance with the contract and the plans and specifications which formed part of it, and her damage is the loss which she has sustained by the failure of the appellant to perform his obligation to her. This loss cannot be measured by comparing the value of the building which has been erected with the value it would have borne if erected in accordance with the contract; her loss can, prima facie, be measured only by ascertaining the amount required to rectify the defects complained of and so give to her the equivalent of a building on her land which is substantially in accordance with the contract."

On p.932 they add:

"But the work necessary to remedy defects in a building and so produce conformity with the plans and specifications may, and frequently will, require the removal or demolition of some part of the structure. And it is obvious that the necessary remedial work may call for the removal or demolition of a more or less substantial part of the building. Indeed - and such was held to be the position in the present case - there may well be cases where the only practicable method of producing conformity with plans and specifications is by demolishing the whole of the building and erecting another in its place. In none of these cases is anything more done than that work which is required to achieve conformity and the cost of the work, whether it be necessary to replace only a small part, or a substantial part, or, indeed, the whole of the building is, subject to the qualification which we have already mentioned and to which we shall refer, together with any appropriate consequential damages, the extent of the building owner's loss. (at p618)

The qualification, however, to which this rule is subject is that, not only must the work undertaken be necessary to produce conformity, but that also, it must be a reasonable course to adopt. No one would doubt that where pursuant to a building contract calling for the erection of a house with cement rendered external walls of second-hand bricks, the builder has constructed the walls of new bricks of first quality the owner would not be entitled to the cost of demolishing the walls and re-erecting them in second-hand bricks. In such circumstances the work of demolition and re-erection would be quite unreasonable or it would, to use a term current in the United States, constitute

"economic waste". (See Restatement of the Law of Contracts, (1932) par. 346). We prefer, however, to think that the building owner's right to undertake remedial works at the expense of a builder is not subject to any limit other than is to be found in the expressions "necessary" and "reasonable", for the expression "economic waste" appears to us to go too far and would deny to a building owner the right to demolish a structure which, though satisfactory as a structure of a particular type, is quite different in character from that called for by the contract. Many examples may, of course, be given of remedial work, which though necessary to produce conformity would not constitute a reasonable method of dealing with the situation and in such cases the true measure of the building owner's loss will be the diminution in value, if any, produced by the departure from the plans and specifications or by the defective workmanship or materials. As to what remedial work is both "necessary" and "reasonable" in any particular case is a question of fact."

What is reasonable in this case

39. Mr Gairns said in cross-examination that he thought the brickwork had been satisfactorily laid. However during construction the house was inspected three times by his staff who criticised the brickwork on each occasion. It is useful to consider the role played by BSS and what its staff found.

The role of BSS

40. According to Mr Lee, the Respondent's practice at the time was to engage BSS as an independent firm of building experts to carry out inspections of its houses during construction to detect defects. He said the Respondent took their recommendations "on board" but did not necessarily follow them. Notwithstanding that, at the conclusion of the construction, the customer was issued with a certificate in the name of BSS Design Group bearing a facsimile of the signature of its Managing Director. The certificate issued to the Owners in this case (Exhibit "EE") reads as follows:

"BSS
DESIGN GROUP
Architects and Building Consultants
BSS Certified Home

BSS is proud to have been commissioned as independent quality assessors to inspect this home. BSS has carried out two inspections and has found that the home meets all the criteria of our independent quality assurance program."

41. What the "criteria" referred to were is not stated but the impression given by the certificate is that the house was inspected twice during construction by an independent firm of Architects and Building Consultants and was found to be of a satisfactory quality. The certificate does not say that the recommendations of that firm were not necessarily followed or that the certificate, although in the name of BSS was in fact issued by the Builder without BSS first checking that their recommendations had been followed or that any defects they had found had been addressed. When this was put in cross-examination to the current Director of BSS, Mr Gairns, he said that the practice had since changed.

42. Despite this certificate it appears that the inspectors from BSS were not satisfied with the brickwork on this house. The reports of the three inspections have been tendered. Those relating to the 6 January and 4 March inspections show the same findings, namely, holes in bed & perpend joints to all levels, variations in perpends from 10mm to 18mm, numerous window sill gaps that did not comply, window sill gaps that did not comply, in that they varied from nothing at all to 4mm – 8mm. The fact that the findings were substantially the same on both occasions would suggest that nothing was done to the brickwork between the two inspections.

43. The third report was discovered in a drawer by the Owners after they took possession. This detailed the results of an inspection done on 13 July 2005. Under the heading "BRICKWORK RECTIFICATION LIST" there are the following comments:

"EXCESSIVE PERPEND RANGE, N. WALL, REAR, S. WALL
EXCESSIVE BED JOINT RANGE, N. WALL, REAR, S. WALL.
MORTAR COLOUR VARIATION, AT SILLS, S. WALL, GARAGE INT. WALL
UNDERSIZED PERPENDS N. WALL
SKEWED BRICKS, N. WALL, S. WALL,
NO SILL GAPS TO 1ST FLOOR WINDOWS IN B5, WC, B.3
(NO KEY TO BATH R. WINDOW – NO SILL GAP LIKELY)
UNDERSIZED SILL GAPS TO FRONT B.2 WINDOWS.
BRICKWORK IS POOR"

44. Mr Lee said in evidence that the reports were considered but that they were "*happy with the brick work"*. I do not believe this evidence. He might have wanted to leave the brickwork as it was but, given his company's claim that it builds quality houses, it is not credible that he would have been happy with brickwork that attracted this sort of criticism from independent experts he had engaged himself. He does not suggest that there was any other advice that the brickwork was satisfactory. Moreover, I do not accept Mr Gairns' evidence that he believes the bricks to have been satisfactorily laid. It is not credible that an expert of Mr Gairns' experience would hold a view that is so contrary to the other expert opinion, which also accords with my own observation.

45. I accept the evidence of Mr McDonald that the brickwork is "patched up" and of poor quality. Would it be reasonable to order the Builder to take it down *"…and replace it with the first quality brickwork they were contracted to supply"* as Mr McDonald suggests as an alternative?

The quality to be expected

46. In cross-examination Mr Lee agreed with the statement that the Owners *"contracted for one of the highest quality homes that can be built"*. The "Monte Carlo" design the Owners selected was, according to Mr Lee, one of the larger houses his company builds. Its base price was $240,000 but with various upgrades and extras requested by the Owners, the contract price became over $300,000.

47. According to the evidence of the valuer, Mr Logan, the Builder has a reputation for building high quality houses and, if he were to sell the house, he would market it as "a Porter Davis home". He said in his valuation that when inspecting the property he observed *"..sub-standard workmanship in the brickwork"*. He said that if there were no issues in regard to the quality of construction it would be worth in the vicinity of $500,000. However with the dyeing of the brickwork and the irregular brickwork he considered a "discount factor" which he assessed at 5% may be applied. He valued the property in its present condition at $475,000 but added that it was very much a hypothetical

exercise. He said that buyers in that area at the top end of the market, as this house would be, are generally astute and “pretty choosy”.

48. The two storey wall on the south needs to be demolished and rebuilt as does the brick sill in the dining room window. There is no evidence as to the effect that replacing only part of the unrendered walls would have on the appearance of the full structure. In a letter to the Owners’ solicitor dated 25 August Mr Lee said that attending to “the few perpend joints in question” would not improve the overall look of the brickwork.

49. I find that the quality of the brickwork is unsightly and so poor that the only practicable method of overcoming all of the problems referred to and producing conformity with the requirements of the contract is by demolishing the whole of the unrendered brickwork on the house and rear wall of the garage and rebuilding it in a proper and workmanlike manner. It will also be necessary to modify the edge of the slab and rebate on the south side to accord with the contract documents and install the flashing required by the drawings. The brick ties will also have to be installed in accordance with the appropriate standards. Liberty will be reserved to apply for any further orders or directions that may be necessary.

SENIOR MEMBER R. WALKER